

551. 506 (261.1) WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The mean monthly pressure as observed at land stations on the coast of the Atlantic varied considerably as compared with the normal at different localities. Large positive departures were the rule in the Azores and south coast of Ireland; these conditions were reversed at Newfoundland and Canadian stations, while the pressure was not far from the normal along the Atlantic and Gulf coasts of the United States, as well as in the Bermudas.

Days on which fog occurred was somewhat below the normal over the Grand Banks and the steamer lanes, and also in the vicinity of the British Isles, except that in the latter locality it was reported frequently during the first decade of the month.

As shown on the Pilot Chart more gales are usually encountered on the North Atlantic in December than in any other month, with the exception of January, and the difference between the two months is slight. The month under discussion was no exception to the general rule, except that the storm area of a number of the disturbances extended considerably farther south than usual.

On the 1st St. Johns, N. F. was the center of a well-developed LOW; the barometer at that station read 28.86 inches, while westerly and northwesterly gales prevailed as far south as the thirty-fifth parallel, as shown by the following storm log:

American S. S. Saugerties:

Gale began on the 1st, wind SW. Lowest barometer 29.87 inches at 1 p. m. on the 1st, wind SW., at latitude 34° 31' N., longitude 46° 56' W. End on the 3d, wind N. Highest force of wind S, SW.; shifts SW.-W.-NW.

On the 1st there was also a disturbance of less intensity central about 8° west of the coast of Spain. Storm log follows:

French S. S. Espagne:

Gale began on the 1st, wind NW. Lowest barometer 29.65 inches at noon on the 1st, wind NW., 8, at latitude 40° 03' N., longitude 18° 28' W. End on the 2d, wind W. Highest force of wind S, NW.; steady from NW.

Both of these depressions moved rapidly eastward and on the 2d the center of the western was somewhere near latitude 50° N., longitude 40° W., while the eastern LOW was over continental Europe.

Comparatively quiet weather prevailed until the 5th when a disturbance was central near Cape Sable and westerly gales covered the region as far south as the Bermudas. The northeastward movement of this LOW was very rapid, as on the 7th the center was not far from Iceland. Storm logs follow:

American S. S. Saugerties:

Gale began on the 5th, wind SW. Lowest barometer 29.64 inches at 4 p. m. on the 5th, wind SW., at latitude 40° 46' N., longitude 62° 43' W. End on the 5th, wind NW. Highest force of wind 9, SW.; steady from the SW.

American S. S. Eastern Leader:

Gale began on the 5th, wind E. Lowest barometer 28.00 inches at 4 p. m. on the 5th, wind NW., 12, at latitude 46° 38' N., longitude 53° 04' W. End on the 6th, wind WSW. Highest force of wind 12, NW.; shifts SE.-SW.-NW.

British S. S. Maraval:

Gale began on the 5th, wind NW. Lowest barometer 29.50 inches at 3.30 a. m. on the 5th, wind W, S, at latitude 32° 46' N., longitude 69° 50' W. End on the 6th, wind WNW. Highest force of wind 9; shifts SW.-W.

Swedish S. S. Stockholm:

Gale began on the 7th, wind SSE. Lowest barometer 29.15 inches at 8 a. m. on the 7th, wind S., at latitude 57° 10' N., longitude 26° 30' W. End on the 9th, wind WSW. Highest force of wind 10; shifts SSE.-S.-SW.-W.

Charts IX, X, XI, and XII show the conditions on December 9th, 10th, 11th, and 12th, respectively. On the 10th and 11th unusually heavy weather was encountered over the greater part of the steamer lanes, while on the latter date gales were also reported in the region between the Bermudas and the American coast. Storm logs follow:

American S. S. Storm King:

Gale began on the 9th, wind N. Lowest barometer 28.90 inches at 8 p. m. on the 10th, wind W., at latitude 47° 15' N., longitude 41° 45' W. End on the 11th, wind NW. Highest force of wind 10; shifts SSW.-NW.

Italian S. S. Maria:

Gale began on the 9th, wind SW. Lowest barometer 29.60 inches at 8 a. m. on the 10th, wind SSW., 9, at latitude 32° 20' N., longitude 51° 34' W. End on the 10th, wind NW. Highest force of wind 9 SSW.; shifts S.-SSW.-W.-NW.

American S. S. Wm. G. Warden:

Gale began on the 10th, wind NE. Lowest barometer 29.88 inches on the 10th, wind NE., 9, at latitude 29° 41' N., longitude 79° 43' W. End on the 11th, wind NW. Highest force of wind 9, NE.; shifts NE.-NW.

American S. S. W. M. Burton:

Gale began on the 11th, wind SSE. Lowest barometer 28.38 inches at 2 p. m. on the 11th, wind NW., 11, at latitude 55° 20' N., longitude 31° 30' W. End on the 12th, wind NW. Highest force of wind 11, NW.; shifts SSW.-W.-NW.

American S. S. Eastern Dawn:

Gale began on the 11th, wind E. Lowest barometer 28.10 inches at 4 p. m. on the 11th, wind ENE., at longitude 40° 18' N., longitude 61° W. End on the 12th, wind NW. Highest force of wind 12, NNW.; shifts NE.-NW.

The disturbance shown on Chart XII in the vicinity of Nova Scotia on the 12th moved but little during the next 24 hours, gradually filling in, although on the 13th southwesterly gales prevailed over a large section of the steamer lanes. Steamer logs follow:

British S. S. Lerington:

Gale began on the 11th, wind E. Lowest barometer 28.23 inches at 10 a. m. on the 12th, wind SE., at latitude 45° 09' N., longitude 56° 08' W. End on the 12th, wind SW. Highest force of wind 11; shifts SW.-W.

British S. S. Valemor:

Gale began on the 12th. Lowest barometer 29.40 inches at 4 p. m. on the 12th, wind S., 8, at latitude 48° N., longitude 44° 49' W. End on the 13th, wind W. Highest force of wind 9, S.; veered very slowly.

Danish S. S. Oscar II:

Gale began on the 13th, wind SSW. Lowest barometer 29.67 inches at 6 a. m. on the 14th, wind WNW., 8, at latitude 56° 55' N., longitude 16° 20' W. End on the 14th, wind NW. Highest force of wind 9, WNW.; steady from WNW.

On the 16th there was apparently a disturbance near Iceland, although not enough reports were received to determine accurately its extent or position. Storm log follows:

Norwegian S. S. Foldenbjord:

Gale began on the 16th, wind SW. Lowest barometer 29.40 inches at 1 p. m. on the 16th, wind WSW., 12, at latitude 56° 07' N., longitude 29° 20' W. End on the 17th, wind WNW. Highest force of wind 12, WSW.; shifts SW.-WSW.-WNW.

On the 17th a LOW of very limited extent was central near latitude 45° N., longitude 40° W. A remarkable

feature of this disturbance was the fact that a number of vessels near the center encountered moderate winds, while the British S. S. *Vasconia*, near by, reported a strong southerly gale, as shown by the following storm log:

Gale began on the 17th, wind N. Lowest barometer 29.64 inches at 8 p. m. on the 17th, wind NNW., at latitude 46° 49' N., longitude 40° 48' W. End of gale on the 18th, wind N. Highest force of wind 11; shifts NNW.-N.

On the 17th westerly gales were reported by land stations on the British Isles, the storm area apparently extending as far west as the 25th meridian. Storm log follows:

Danish S. S. *United States*:

Gale began on the 16th, wind SW. Lowest barometer 29.78 inches at noon on the 16th. Wind SW., 8, latitude 53° 03' N., longitude 33° 09' W. End on the 17th, wind WNW. Highest force of wind 9, W.; shifts SW.-W.

From the 19th to the 23d heavy weather was the rule in the vicinity of the British Isles. On the 20th gales swept over the steamer lanes from Newfoundland to the coast of Europe. On the 21st the storm area covered a narrow strip between the 10th and 35th meridians and by the 22d it had contracted still farther, as on that date only a few vessels near the fiftieth parallel, between England and the twentieth meridian reported westerly gales. Storm logs follow:

British S. S. *Celtic*:

Gale began on the 19th, wind SSW. Lowest barometer 29.54 inches at 10 a. m. on the 19th, wind SSW., at latitude 51° 14' N., longitude 15° 36' W. End at midnight on the 19th, wind WNW.

French S. S. *La Lorraine*:

Gale began on the 19th, wind SW. Lowest barometer 29.65 inches at noon on the 21st, wind NW., 8, at latitude 49° 30' N., longitude 30° 44' W. End on the 21st, wind NW. Highest force of wind 12, shifts not given.

On the 22d Newfoundland was again the center of a severe disturbance, with strong northwesterly gales in the southerly quadrants. The low apparently moved rapidly northeastward during the next 24 hours, although it was impossible to plot its position accurately on the 23d, on account of the lack of observations. Storm logs follow:

British S. S. *Vasconia*:

Gale began on the 21st, wind S. Lowest barometer 29.20 inches at 4 a. m. on the 22d, wind WSW., at latitude 42° 24' N., longitude 61° 40' W. End on the 22d, wind NNW. Highest force of wind 11; shifts W.-WNW.-NW.

British S. S. *Burgondier*:

Gale began on the 22d, wind W. Lowest barometer 29.58 inches at 9 a. m. on the 22d, wind W., 10, at latitude 43° N., longitude 56° 15' W. End at midnight on the 22d. Highest force of wind 11; shifts W.-NW.

Dutch S. S. *Newyork*:

Gale began on the 23d, wind SSW. Lowest barometer 29.70 inches at 2 p. m. on the 23d, wind W. 8, at latitude 54° 28' N., longitude 30° 40' W. End on the 24th, wind W. Highest force of wind 10; shifts SSW.-SW.-W.

From the 24th to the 27th the conditions were comparatively featureless, although a few reports were received from vessels in widely scattered localities that encountered gales during this period.

From the 28th to the 31st a low remained in the vicinity of Nova Scotia, the storm area varying considerably from day to day, as on the 29th it extended to mid-ocean, while on the other dates it was restricted more to the western portion of the steamer lanes. Storm logs follow:

British S. S. *Osconian*:

Gale began on the 28th, wind SSE. Lowest barometer 29.33 inches at noon on the 28th, wind SSE., 7, at latitude 43° N., longitude 54° 47' W. End on the 29th. Highest force of wind 10; shifts SSE.-WNW.

British S. S. *Huronian*:

Gale began on the 28th, SSW. Lowest barometer 29.48 inches at 4 p. m. on the 29th, wind WSW., 8, at latitude 50° 06' N., longitude 33° 26' W. End on the 29th, wind WNW. Highest force of wind 10; shifts SSW.-WSW.

Italian S. S. *Milazzo*:

Gale began on the 29th, wind NW. Lowest barometer 29.54 inches on the 29th, wind NW., 10, at latitude 34° 19' N., longitude 67° W. End on the 30th, wind NW. Highest force of wind 10, NW., steady from NW.

British S. S. *Gloria de Larrinaga*:

Gale began on the 30th, wind S. Lowest barometer 29.29 inches at 4 p. m. on the 30th, wind S., 8, at latitude 37° 20' N., longitude 52° 45' W. End on the 31st, wind NW. Highest force of wind 8; shifts not given.

British S. S. *Osconian*:

Gale began on the 30th, wind SSE. Lowest barometer 29.14 inches at 10 a. m. on the 30th, wind NNW., 9, at latitude 41° 22' N., longitude 63° 06' W. End on the 31st, wind N. Highest force of wind 11; shifts SSE.-WNW.-N.

American S. S. *Vacuum*:

Gale began on the 29th, wind NNW. Lowest barometer 29.88 inches at 2:30 p. m. on the 29th, wind NNW., 5, at latitude 35° 50' N., longitude 75° 12' W. End on the 30th, wind W. Highest force of wind 9, NNW.; steady from NNW.

From the 28th to the 30th there was a disturbance near the British Isles, with westerly gales over a limited area. Storm log from British S. S. *Turcoman* follows:

Gale began on the 29th, wind S. Lowest barometer 30.04 inches at 2 a. m. on the 30th, wind SW., 10, at latitude 51° 12' N., longitude 19° 40' W. End on the 30th, wind WNW. Highest force of wind 11, SW.; shifts SSW.-SW.-WSW.

551.506 (265.2)

NORTH PACIFIC OCEAN.

By F. G. TINGLEY.

Pressure was considerably below normal in the Aleutian region until the 14th, and a series of depressions moved eastward or southeastward across Bering Sea and the Gulf of Alaska, causing almost constant gales over the eastern portion of the trans-Pacific steamer lanes. On the 2d the barometer at Kodiak fell to 28.30, and on the 7th a reading of 28.80 was reported from Dutch Harbor.

Commencing about the 14th pressure rose rapidly over the Aleutian area and Alaska. At Dutch Harbor the barometer on the 16th was 30.56 inches, about 1 inch above normal, and at Tanana, in interior Alaska, 31.18 inches. In connection with this general pressure change depressions developed in both the eastern and western portions of the ocean.

As early as the 13th there were evidences of a depression between the Hawaiian Islands and the California coast. During the several days succeeding that date there was very little change observed in its position. On the 17th and 18th, however, it moved to the coast, where it remained until the 22d, then passing inland but leaving a fresh depression forming to the westward.

In the western portion of the Pacific three depressions moved eastward from Asiatic coastal regions during the early days of the month, the most important being one that was central near Nemuro on the 2d (Eastern time) with a central isobar of 29.29 inches.

On the 4th a typhoon appeared to the south of Guam, moving northwestward. According to the *Weekly*